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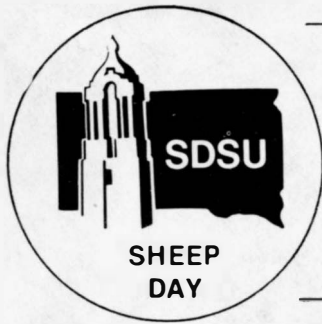
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SCHEDULING LAMBING ON A WEEKLY INTERVAL

(Progress Report)

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SHEEP 81-2

Summary

Results of the use of flumethasone to group lambing are reported. Ewes treated once on days 138, 139, 140, 141, 142, 143 or 144 of gestation were compared to ewes treated once on day 140, 141, 142, 143, 144, 145 or 146 of gestation. Treatment during the period from day 140 to 146 resulted in 80% of the ewes lambing within 72 hours of treatment compared to 20% for the control ewes. Treatment on day 138 to 144 resulted in a 64% response within 72 hours. This approach provides a management alternative that allows a major portion of lambs to be born within a projected time period at weekly intervals.

Introduction

One of the most critical times in a sheep operation is at lambing. Much of the success or failure is determined at this time by the number of lambs kept alive at or shortly after birth. This requires careful attention and a high input of labor to maximize survival, especially during cold weather. The ability to group lambing into a short, predetermined period would offer several management advantages. Among these are closer observation during actual lambing, reduction or better utilization of labor, maximum use of facilities through better planning and ease of vaccination, docking, etc. by having lambs of similar age. Results reported in this paper deal with the use of flumethasone to induce lambing in groups on a weekly basis.

Experimental Procedure

Breeding marks were recorded daily for ewes at the South Dakota State University Sheep Research Unit during the breeding seasons of 1974 through 1976 and 1978 and 1979 for use in this study. All ewes were exposed to rams for 5 weeks. Ram briskets were greased daily and breeding marks recorded daily when ewes received their flushing ration. Prior to lambing, ewes were randomly allotted into one of two treatment groups, one receiving a 2 mg. flumethasone injection, the second a physiological saline control injection. Every Wednesday morning between 8:00 and 9:30 a.m., all ewes on or between days 138 through 144 of gestation received their respective treatment during the 1975, 1976 and 1977 lambing seasons. During this period, 184 ewes received the control treatment and 185 received the flumethasone treatment. For the 1979 and 1980 lambing seasons, ewes were treated on or between days 140 through 146 of gestation. During these two years, 135 ewes served as controls and 205 were treated with flumethasone. Injections were given intramuscularly in 4 cc. volumes. Lambing was monitored, with checks for parturition at a maximum time interval of 4 hours.

Prepared for Sheep Day, June 5, 1981.

Results and Discussion

Table 1 shows the preliminary results of this portion of the study. Alteration of the treatment time by 2 days from days 138 through 144 to 140 through 146 of gestation improved the percentage responding within 72 hours of treatment. Although 3% more lambed in the control group, the increase was much higher (16%) for the flumethasone treatment as a result of the 2-day shift in treatment time. The standard error for those responding within 72 hours of treatment was also reduced from 2.1 to 1.6 hours, indicating better precision of induction control. Previous work (see 1979 SDSU Sheep Day Report, A.S. Series 79-16) indicated that injection of flumethasone at this level was of minor effectiveness on days 138 and 139 of gestation. Therefore, these results are consistent with expectations. Further analysis needs to be completed to determine if injection on days 145 and 146 improved response compared to the controls for days 145 and 146. If it does not, then it would appear possible to effect the same degree of control by only treating ewes on days 140 through 144 of gestation and letting those on days 145 and 146 lamb naturally. This would reduce the needed amount of flumethasone by approximately 14%. This level of response, 80% within 72 hours of treatment, is very encouraging with a high percentage occurring around the mean time of 47.5 hours. This would allow the producer to concentrate his labor over this particular period and provide for weekly management grouping of lambs. It is important to remember accurate breeding dates are needed if this program is to be successful.

Table 1. Effect of Day of Gestation on Induction of Lambing With Flumethasone

Day of gestation when treated	Percent lambing within 72 hours		Mean hours to lambing for those within 72 hours	
	Flu	Saline	Flu	Saline
138-144	64	17	49.5 \pm 2.1 ^a	42.2 \pm 5.0
140-146	80	20	47.5 \pm 1.6	46.6 \pm 5.5

^a Standard error of the mean.